chemical preparations, &c. whether of the animal or vegetable kingdom.

Thoſe, who imagine, that all ſalts and oils hurt the vegetating force of matter, have fallen into a great error; for from whence can ſuch a vegetating force proceed, but from a due mixture and modification of the ſalts and oils with the earthy principle, which all the world allows to be of itſelf inert?

It is true indeed, that a very large portion of ſalts or oils renders ſubſtances antiſeptic, or very ſlow either of vegetation or putrefaction, as is well known with regard to ſea-ſalt, a large quantity of which preſerves ſubſtances from putrefaction; though, as the learned Dr. Pringle obſerves, a ſmaller one rather forwards that proceſs, as it does likewiſe vegetation. Caſtor, which as I formerly obſerved, is antiſeptic, ſeems to owe this quality to nothing elſe but a large quantity of a ſluggiſh fetid oil, which it contains.

LXXXIII. *An Account of a Cure of a paralytic Arm, by Electricity: In a Letter from* Cheney Hart, *M. D. to Mr.* William Watſon, *F. R. S.*

Salop, March 20, 1756.

Read Mar. 25, 1756. THough 'tis a long time ſince I had occaſion to write to you, yet I take the liberty of now troubling you with a letter, to acquaint you with the caſe of a young woman I lately have had under my care at the infirmary here, upon whom

whom the electrical operations have had greater good effect than I have ever elſe been able to obſerve. Elizabeth Stokes, aged twenty-three, a very luſty and healthy woman, was, in the beginning of January laſt, ſeized with a rheumatic kind of pain in her right arm, particularly about the wriſt; and in two or three days time afterwards, the finger and thumb of that hand contracted up ſo cloſe, that they could not be opened with any force the girl herſelf could uſe to them. In this manner ſhe continued till January 17, when ſhe came to our infirmary: her hand and fingers then ſeemed to be greatly ſwelled, but cloſe drawn together; her arm was pained from the contraction of her hand; and from a creeping pain ſhe felt about her wriſt and elbow, ſhe was apprehenſive thoſe joints were about to be drawn up as the hand. She had at this time loſt all kind of ſenſation in the hand itſelf, which felt cold to the touch, and looked livid. In every other reſpect ſhe was in perfect health. Imagining the contraction a conſequence of the rheumatic pain, I adviſed her to the uſe of gum-guaiac. twice a day, with a julep of ſpir. mindereri, *&c.* as in our own Pharmacopeia, and to rub the part affected well, thrice a day, with a fleſh-bruſh, and afterwards with linimentum ſaponaceum. This ſhe continued five days without the leaſt obſervable alteration; when finding her no better, I directed our apothecary, Mr. Winnal, to draw the electrical ſparks from the contracted hand, and to communicate the ſhock alſo, by means of the wire-chain tied about her wriſt from the ſuſpended phial. This he undertook to do on Friday the 23d, and for the firſt half hour the girl did not ſeem at all ſenſible of the

electrical ſtrokes; but after about 30 minutes, ſhe ſaid they gave her pain in that hand, and in about ten minutes more her fingers began to tremble and open ſo much, that we could eaſily ſeparate them, and by degrees extend them all. After this the ſhock was given to the palm of her hand, to each finger ſeparately, and to the thumb and wriſt for about ten minutes longer, when the whole were become perfectly pliable and ſoft, and ſhe could open and ſhut the hand herſelf, without aſſiſtance, and without pain; though ſhe found herſelf unable to uſe thoſe fingers very freely, they being very weak, as well as that wriſt. We then rubbed the hand and wriſt well with opodeldoc, and wrapt it up cloſe in flannel, and recommended to her to repeat the rubbing it frequently through that day, and continue her guaiacum as before. She remained very eaſy and well all day, but at night her hand began to be more painful, and ſhe expreſſed a great fear, leſt it ſhould contract again, as ſhe felt a creeping pain in all the inſide of her arm. However, by repeated friction with the fleſh-bruſh and opodeldoc, this went off, and next morning ſhe had no complaint in her arm or elſewhere. She was again electrified this ſecond day about the hand, which remained open and pliable enough, and the operation was repeated every day for a week after, (tho the contraction never returned again) till the ſhock began to be ſo painful, that ſhe deſired to be excuſed from it any more, and, as ſhe ſeemed quite well, ſhe was diſcharged as cured from the infirmary on January the thirty-firſt.

As ſhe was a working ſervant to a family in the country, ſhe returned to her buſineſs with the ſame eaſe

eaſe as formerly before this contraction, and continued well till on February ninth or tenth, when being obliged to waſh clothes from morning till night, that ſame evening after the waſhing was finiſhed, ſhe felt her fingers and arm grow painful firſt, and in leſs than an hour's time they contracted, as they had done before. Attempts were immediately uſed by herſelf and the family to draw the fingers open, but in vain, and whenever they tried to force them open, they gave the girl moſt violent pain through that whole arm. On this ſhe was brought back to our infirmary again, Feb. 13, and electrified as before, in the preſence of myſelf and ſeveral gentlemen of this place. Her hand was now as cloſely contracted as ſeemed poſſible for the fingers to be drawn, and ſhe had no ſenſation of heat or cold upon it, nor pain. The wire from the ſuſpended phial being tied round that wriſt, ſhe applied her hand to the electrified conductor, and received repeated ſtrokes, and ſome very ſtrong ones, for 40 minutes before ſhe felt any pain from it, or the fingers relaxed any at all; and we rubbed her frequently with the fleſh-bruſh betwixt whiles, and tried to ſtir her fingers. After about 45 minutes, ſhe ſaid, each time ſhe received the electrical ſhock, it gave her much pain, and then her firſt finger began to move a little, after that the ſecond, and the third, and the thumb, till at length they were all opened and relaxed, and by repeated frictions and electrical ſtrokes, for about an hour and 20 minutes, the motion of the hand was quite reſtored. I then directed it to be rubbed well with opodeldoc and covered with flannel, to keep it warm, and heard no more of her till ſeven o'clock

at

at night, when her arm was become vaſtly painful, her fingers trembled and drew up a little, and the inſide of the fore arm felt all knotty, and as if the muſcles there were drawn like cords, and the whole hand and arm was ſore. In this caſe I would have had ſome blood taken immediately from that arm; but upon inquiry I found her menſes were upon her ſince the electrifying in the morning. I therefore only ordered a bliſter above the elbow of that arm, and a proportionate quantity of tinctura Thebaica to be added to the linimentum ſaponaceum, with which her fore arm and hand were to be well rubbed. Theſe applications ſoon took off the threatning ſymptoms, and next morning ſhe was eaſy; the knots in her arm almoſt quite diſappeared, and ſhe could move her fingers very well. She was electrified the ſecond day about ten minutes, but no longer, as it ſeemed unneceſſary; and from this time was electrified no more, but continued the anodyne liniment every day, with the uſe of the fleſh-bruſh, for about ten or twelve days longer, when ſhe appeared perfectly well as before, and her fingers could be uſed and moved with eaſe. Nevertheleſs, to prevent a return, I directed an iſſue to be cut in that arm, and worn conſtantly, which ſhe had done, and ſhe had alſo a ſtrengthening plaiſter about her wriſt, as ſhe ſaid that was weaker than it ſhould be. This was the whole of her treatment. She was kept a patient here till this day, March 20, when, as her diſorder has no more returned, and ſhe can move her fingers perfectly well, ſhe was diſcharged from hence cured.

I will not weary you with remarks upon this caſe, nor on the ſtrong hints it affords of the wonderful force

force and virtue of electricity in rheumatic or ſpaſmodic diſorders. Certainly it is worth while to make further experiments to aſcertain its uſe in medicine, as well as in philoſophy. The Swediſh experiments made by Dr. Zetzell, (as related in the *Gentleman's Magazine*, 1755, p. 314) directed me to the trial of it in this caſe, wherein I have the pleaſure to ſee an admirable agreement in the effect here and in Sweden. As ſuch therefore I ſend this account to you, which, if you think it may be of uſe, you are at liberty to communicate to the gentlemen of your Society, for whom I have a great eſteem, and ſhould be glad to hear, at your leiſure, from you, what new diſcoveries have been made by any of you this winter, in any of the arts or ſciences. I muſt now beg leave to conclude with ſubſcribing myſelf,

Dear Sir,

Your very obedient humble ſervant,

Cheney Hart.